

ABSTRACT OF THE DISCLOSURE

In one aspect, the invention includes a method of forming an insulating material comprising: a) providing a substrate within a reaction chamber; b) providing reactants comprising a Si, F and ozone within the reaction chamber; and c) depositing an insulating material comprising fluorine, silicon and oxygen onto the substrate from the reactants. In another aspect, the invention includes a method of forming a boron-doped silicon oxide having Si-F bonds, comprising: a) providing a substrate within a reaction chamber; b) providing reactants comprising Triethoxy fluorosilane, a boron-containing precursor, and ozone within the reaction chamber; and c) depositing a boron-doped silicon oxide having Si-F bonds onto the substrate from the reactants. In yet another aspect, the invention includes a method of forming a phosphorus-doped silicon oxide having Si-F bonds, comprising: a) providing a substrate within a reaction chamber; b) providing reactants comprising triethoxy fluorosilane, a phosphorus-containing precursor, and ozone within the reaction chamber; and c) depositing a phosphorus-doped silicon oxide having Si-F bonds onto the substrate from the reactants.